

Serial No.: 10/034,852

Docket No.: UNI 0041 PA/40809.57

Amendments to the Claims

1-18. (Canceled)

19. (Currently amended) A coated machine tool comprising a multilayer wear resistant coating applied to a base material of said machine tool, said coating comprising a relatively hard underlayer and a chemically inert rare earth oxide overlayer, wherein:

said relatively hard underlayer is formed over said base material of said machine tool and comprises at least two layers;

one of said layers of said underlayer comprises a metal and is formed over said base material;

another of said layers of said underlayer comprises a metal nitride, metal carbide, or metal carbo-nitride and is formed over said metal layer;

said ~~metal~~rare earth oxide overlayer is formed over said underlayer and said overlayer constitutes the outermost layer of the coated machine tool; and

said ~~metal~~rare earth oxide overlayer comprises a rare earth oxide ~~overlayer~~ that exhibits positive free energies of reaction with titanium.

20. (Canceled)

21. (Previously presented) A coated machine tool as claimed in claim 19 wherein said rare earth oxide comprises an oxide of scandium

22. (Previously presented) A coated machine tool as claimed in claim 19 wherein said rare earth oxide comprises an oxide of lanthanum.

23. (Previously presented) A coated machine tool as claimed in claim 19 wherein said rare earth oxide comprises an oxide of yttrium.

24. (Currently amended) A coated machine tool as claimed in claim 19 wherein said rare earth oxide overlayer comprises an oxide of zirconium.

Serial No.: 10/034,852

Docket No.: UNI 0041 PA/40809.57

25. (Currently amended) A coated machine tool as claimed in claim 19 wherein said rare earth oxide overlayer comprises an oxide of hafnium.

26. (Currently amended) A coated machine tool as claimed in claim 19 wherein said rare earth oxide overlayer comprises an oxide of niobium.

27-46. (Canceled)

47. (Currently amended) A coated machine tool comprising a multilayer wear resistant coating for application to a base material of said machine tool, said coating comprising a relatively hard underlayer, an yttrium oxide overlayer, and an interlayer between said underlayer and said overlayer, wherein:

said relatively hard underlayer is formed over said base material of said machine tool;

said ~~metal-yttrium~~ oxide overlayer ~~comprises an oxide of a first metal and is formed over said interlayer and said overlayer constitutes the outermost layer of the coated machine tool;~~

said interlayer comprises first and second components;

said first component of said interlayer comprises ~~yttrium~~said first metal;

relative proportions of said first and second components of said interlayer are graded across said interlayer such that a quantity of said ~~yttrium~~ first metal in said interlayer increases from a side of said interlayer adjacent to said underlayer to a side of said interlayer adjacent to said overlayer; and

said yttrium oxide overlayer exhibits positive free energies of reaction with titanium;

~~—said first component of said interlayer comprises yttrium; and~~

~~—a quantity of said yttrium in said interlayer increases from a side of said interlayer adjacent to said underlayer to a side of said interlayer adjacent to said overlayer.~~